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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,893	10/31/2003	Lain-Ken Lin	JLINP171	2947
25920	7590	09/22/2005		
MARTINE PENILLA & GENCARELLA, LLP 710 LAKEWAY DRIVE SUITE 200 SUNNYVALE, CA 94085			EXAMINER THOMAS, LUCY M	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/698,893	Applicant(s) LIN ET AL.	
	Examiner Lucy Thomas	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Line 14 n page 3 of Specification recites resistor element 121, where the said element was disclosed as 112 in Figure 1. Appropriate correction is required.

Claim Objections

2. Claim 7, 10 and 14 are objected to because of the following informalities:
Recitation of "an terminal voltage" in Claim 7, line 9 should be corrected to "a terminal voltage." Recitation of "an inverted output end of the operational amplifier" in Claim 10, line 5, should be corrected to "an inverted input end of the operational amplifier".
Recitation of "an drive IC" in Claim 14, line 10 should be corrected to "a drive IC".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Tabata (US 4,914,540). Regarding Claim 1, Tabata discloses an over voltage protective device (Figures 4 and 7) in parallel connection with a direct-current (DC motor) A, comprising:

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a voltage dividing circuit 8, 9 having one end thereof electrically connected to an input voltage of the DC motor, and the other end thereof connected to ground; and a control unit 4 being in parallel connection with one part of the voltage dividing circuit, and for accessing a voltage level of the part of the voltage-dividing circuit to further drive the DC motor. Regarding Claim 2, Tabata discloses the over voltage protective device, wherein when a voltage level of the part is larger than a reference voltage, the control unit stops driving the DC motor (Column 2, lines 37-59, Column 3, lines 35-68, Column 4, lines 1-9). Regarding Claim 3, Tabata discloses a reference voltage V_2 , which is a product of the rated voltage of the DC motor, a reciprocal of a total resistance of the voltage dividing circuit, and a resistance of the part of the voltage dividing circuit (Column 3, lines 45-52, 63-67). Regarding Claim 4, Tabata discloses a voltage divider circuit, which is composed of a first resistor 8 and a second resistor 9, and the part of the voltage dividing circuit is the second resistor (Column 3, lines 39-45). Regarding Claim 5, Tabata discloses a control unit 4, which drives the DC motor in responsive to a control signal and is part of an integrated circuit (Column 2, lines 41-50, 66-68).

5. Claims 1,5,6 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Xi (US 6,879,120). Regarding Claim 1, Xi discloses an over voltage protective device (Figures 1 and 2) in parallel connection with a direct-current (DC motor), comprising: a voltage dividing circuit R1, R12 having one end thereof electrically connected to an input voltage of the DC motor, and the other end thereof connected to ground; and a control unit 22a being in parallel connection with one part of the voltage dividing circuit, and for accessing a voltage level of the part of the voltage-dividing circuit to further drive

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the DC motor (Column 4, lines 64-67). Regarding Claim 5, Xi discloses a control unit 22a, which is a micro control unit (MCU) driver (Column 4, lines 34-39). Regarding Claim 6, Xi discloses a DC motor, which is a DC fan motor Column 1, lines 9-12). Regarding Claim 7, Xi discloses an over voltage protective device of DC motor (Figure 1) having a plurality of switches, comprising: a first resistor R11 with one end thereof electrically connected to an input end voltage of the DC motor; a second resistor R12 with one end thereof electrically connected to the other end of the first resistor, and the other end thereof connected to ground; and a micro control unit (MCU) driver 22a having a plurality of output terminals driving the power switches SW1, SW2, and electrically connected between the first resistor and the second resistor; wherein, when a terminal voltage of the second resistor is larger than a reference voltage, the output terminals stop driving the power switches (Column 5, lines 7-12, Column 6, lines 11-20). Regarding Claim 8, Xi discloses an over voltage protective device of DC motor, wherein the reference voltage is a product of the input voltage of the DC motor, a reciprocal of the sum of resistances of the first resistor and the second resistor, and a resistance of the second resistor (Column 4, lines 61-64, Column 5, lines 1-12).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 9-15 are rejected under 35 U.S.C. 103(a) as being anticipated by Xi (US 6,879,120) in view of Nelson (US 5,087,865). Regarding Claims 9, Xi discloses an over voltage protective device of DC motor (Figure 1) comprising: a first voltage dividing circuit R11, R12 having one end thereof electrically connected to an input end voltage of a DC motor, and the other end thereof connected to ground; a control unit 22a for controlling the start of the DC motor; and an operation amplifier having a non-inverted input end electrically connected to the first voltage-dividing circuit, an inverted input end thereof electrically connected to the second voltage dividing circuit, and an output end thereof electrically connected to the control unit; wherein, when a voltage at the non-inverted input end of the operational amplifier is larger than a voltage at the inverter input end, the operational amplifier outputs an over voltage interrupt signal to the control unit, and the control unit stops driving the DC motor (Column 5, lines 7-12, 20-25, Column 6, lines 11-20). Xi fails to disclose a second voltage dividing circuit, having one end thereof electrically connected to a reference voltage end, and the other end connected to ground. However, Nelson discloses a second voltage divider circuit connected to the non-inverting end of an operational amplifier 300, 320, 340, which is used as a comparator (Figure 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the operational amplifier of Xi, to include a second voltage divider for providing a more flexible operating range, not just a cut off point. Regarding Claim 10, Xi discloses a first voltage dividing circuit comprises a first resistor R11 and a second resistor R12, the non-inverted input end of the amplifier is

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electrically connected to the between the first resistor R11 and the second resistor R12.

Xi fails to disclose a second voltage dividing circuit comprises a third resistor and a fourth resistor, and an inverted input end of the operational amplifier is electrically connected between the third and fourth resistor. However, Nelson discloses a second voltage divider comprises a third resistor and a fourth resistor, and an inverted input end of the operational amplifier is electrically connected between the third and the fourth resistor (300, 320, 340 in Figure 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the operational amplifier of Xi, to include a second voltage divider comprising a third resistor and a fourth resistor, at the inverted input of the operational amplifier for providing a more flexible operating range, not just a cut off point. Regarding Claim 11, Xi discloses an operational amplifier, which is used as a comparator (Column 5, lines 61-63, Column 6, lines 1-14). Regarding Claim 12, Xi discloses a control unit, which is a drive IC 22a (Column 4, lines 17-28). Regarding Claim 13, Xi discloses a DC fan motor (Column 1, lines 7-10). Regarding Claim 14, Xi discloses an over voltage protective device of Dc motor (Figure 1) having plurality of power switches, comprising: a first resistor R11 with one end thereof electrically connected to a voltage input end of the DC motor; a second resistor R12 with one end thereof connected to the other end of the first resistor, and the other end thereof connected to ground; a drive IC 22a having a plurality of output terminals for respectively driving the power switches SW1, SW2; and a comparator having a non-inverted input end thereof connected between the first resistor R11 and the second resistor R12, and an output end thereof electrically connected to the drive IC; wherein,

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when a voltage at the non-inverted input end is larger than a voltage at the inverted input end, the comparator outputs an over voltage interrupt signal to the drive IC, and the output terminals then stops driving the power switches, SW1, SW2 (Column 4, lines 17-28, Column 5, lines 7-12, 20-25, 61-63, Column 6, lines 1-14, 11-20). Regarding Claim 15, Xi discloses that the reference voltage is set corresponding to the minimum rotational speed of the rotor, which corresponds to the rated voltage of the motor (Column 5, lines 7-12).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6,650,072, US 6,538,866.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucy Thomas whose telephone number is 571-272-6002. The examiner can normally be reached on Monday - Friday 8:00 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT
September 12, 2005



PHUONG T. VU
PRIMARY EXAMINER